



# Intel® Core™ i5-3230M Processor

3M Cache, up to 3.20 GHz rPGA

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## Essentials

Export specifications

Product Collection	Legacy Intel® Core™ Processors
Code Name	Products formerly Ivy Bridge
Vertical Segment	Mobile
Processor Number	i5-3230M
Status	Launched
Launch Date ?	Q1'13
Lithography ?	22 nm
Recommended Customer Price ?	

## Performance

# of Cores ?	2
# of Threads ?	4
Processor Base Frequency ?	2.60 GHz
Max Turbo Frequency ?	3.20 GHz
Cache ?	3 MB SmartCache
Bus Speed ?	5 GT/s DMI
TDP ?	35 W

## Supplemental Information

Embedded Options Available ?	No
Datasheet	View now

## Memory Specifications

Max Memory Size (dependent on memory type) ?	32 GB
Memory Types ?	DDR3/L/-RS 1333/1600
Max # of Memory Channels ?	2
Max Memory Bandwidth ?	25.6 GB/s
ECC Memory Supported † ?	No

## Processor Graphics

Processor Graphics † ?	Intel® HD Graphics 4000
Graphics Base Frequency ?	650 MHz

Graphics Max Dynamic Frequency <a href="#">?</a>	1.10 GHz
Graphics Output <a href="#">?</a>	eDP/DP/HDMI/SDVO/CRT
Intel® Quick Sync Video <a href="#">?</a>	Yes
Intel® InTru™ 3D Technology <a href="#">?</a>	Yes
Intel® Flexible Display Interface (Intel® FDI) <a href="#">?</a>	Yes
Intel® Clear Video HD Technology <a href="#">?</a>	Yes
# of Displays Supported <sup>‡</sup>	3
Device ID	0x166

### Expansion Options

PCI Express Revision <a href="#">?</a>	3.0
PCI Express Configurations <sup>‡</sup> <a href="#">?</a>	1x16, 2x8, 1x8 2x4
Max # of PCI Express Lanes <a href="#">?</a>	16

### Package Specifications

Sockets Supported <a href="#">?</a>	FCPGA988
Max CPU Configuration	1
T <sub>JUNCTION</sub> <a href="#">?</a>	105 C
Package Size	37.5mm x 37.5mm (rPGA988B)

### Advanced Technologies

Intel® Turbo Boost Technology <sup>‡</sup> <a href="#">?</a>	2.0
Intel® vPro™ Platform Eligibility <sup>‡</sup> <a href="#">?</a>	No
Intel® Hyper-Threading Technology <sup>‡</sup> <a href="#">?</a>	Yes
Intel® Virtualization Technology (VT-x) <sup>‡</sup> <a href="#">?</a>	Yes
Intel® Virtualization Technology for Directed I/O (VT-d) <sup>‡</sup> <a href="#">?</a>	No
Intel® VT-x with Extended Page Tables (EPT) <sup>‡</sup> <a href="#">?</a>	Yes
Intel® 64 <sup>‡</sup> <a href="#">?</a>	Yes
Instruction Set <a href="#">?</a>	64-bit
Instruction Set Extensions <a href="#">?</a>	Intel® AVX
Intel® My WiFi Technology <a href="#">?</a>	Yes
4G WiMAX Wireless Technology <a href="#">?</a>	Yes
Idle States <a href="#">?</a>	Yes
Enhanced Intel SpeedStep® Technology <a href="#">?</a>	Yes
Intel® Demand Based Switching <a href="#">?</a>	No
Thermal Monitoring Technologies <a href="#">?</a>	Yes
Intel® Fast Memory Access <a href="#">?</a>	Yes
Intel® Flex Memory Access <a href="#">?</a>	Yes
Intel® Identity Protection Technology <sup>‡</sup> <a href="#">?</a>	Yes

### Security & Reliability

Intel® AES New Instructions 	Yes
Secure Key 	Yes
Intel® Trusted Execution Technology ‡ 	No
Execute Disable Bit ‡ 	Yes
Anti-Theft Technology 	Yes

## More support options for Intel® Core™ i5-3230M Processor (3M Cache, up to 3.20 GHz) rPGA



Product Support



Downloads and Software



Support Community



Warranty and Replacement



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Refer to Datasheet for formal definitions of product properties and features.

"Announced" SKUs are not yet available. Please refer to the Launch Date for market availability.

Some products can support AES New Instructions with a Processor Configuration update, in particular, i7-2630QM/i7-2635QM, i7-2670QM/i7-2675QM, i5-2430M/i5-2435M, i5-2410M/i5-2415M. Please contact OEM for the BIOS that includes the latest Processor configuration update.

‡ This feature may not be available on all computing systems. Please check with the system vendor to determine if your system delivers this feature, or reference the system specifications (motherboard, processor, chipset, power supply, HDD, graphics controller, memory, BIOS, drivers, virtual machine monitor-VMM, platform software, and/or operating system) for feature compatibility. Functionality, performance, and other benefits of this feature may vary depending on system configuration.

See <http://www.intel.com/content/www/us/en/architecture-and-technology/hyper-threading/hyper-threading-technology.html?wapkw=hyper+threading> for more information including details on which processors support Intel® HT Technology.

Max Turbo Frequency refers to the maximum single-core processor frequency that can be achieved with Intel® Turbo Boost Technology. See [www.intel.com/technology/turboboost/](http://www.intel.com/technology/turboboost/) for more information.

The Recommended Customer Price ("RCP") is pricing guidance for Intel products. Prices are for direct Intel customers, typically represent 1,000-unit purchase quantities, and are subject to change without notice. Taxes and shipping, etc. not included. Prices may vary for other package types and shipment quantities, and special promotional arrangements may apply. If sold in bulk, price represents individual unit. Listing of these RCP does not constitute a formal pricing offer from Intel. Please work with your appropriate Intel representative to obtain a formal price quotation.

System and Maximum TDP is based on worst case scenarios. Actual TDP may be lower if not all I/Os for chipsets are used.

For benchmarking data see <http://www.intel.com/performance>.

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See <http://www.intel.com/content/www/us/en/processors/processor-numbers.html> for details.

Processors that support 64-bit computing on Intel® architecture require an Intel 64 architecture-enabled BIOS.

